professional studio monitor

FOSTEX®

PM0.4

- Reference Manual -

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,

DO NOT REMOVE COVER (OR BACK).

NO USER - SERVICEABLE PARTS INSIDE.

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

"WARNING"

"TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE,"

SAFETY INSTRUCTIONS

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.



An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.

CAUTION:
TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION:
POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU' AU FOND.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

12. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
14. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
15. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
16. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
    A. The power supply cord or the plug has been damaged; or
    B. Objects have fallen,or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped, or the enclosure damaged.
17. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.
18. The appliance should be situated away from drops of water or spray of water.
19. Objects containing liquid such as vase must not be put on the appliance.
20. The appliance is not completely isolated from the power supply even if the power switch is at off position.
21. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
22. Only use attachments/accessories specified by the manufacturer.
23. An appliance with a protective earth terminal should be connected to a mains outlet with a protective earth connection.
24. An appliance should be placed in a position where an AC plug / inlet can be easily pulled out by hand.
25. Main plug is used as the disconnection device. It shall remain readily operable and should not be obstructed during intended use. To be completely disconnected the apparatus from supply mains, the mains plug of the apparatus shall be disconnected from the mains socket outlet completely.

Introduction

Thank you for purchasing the Fostex PM0.4 Professional Studio Monitor. As with all Fostex products, the PM0.4 has been designed to provide superlative performance, unquestioned reliability and exceptionally high value.



The PM0.4 was specifically engineered to fulfillall of your critical near-field monitoring needs and is emblematic of the years of experience Fostex has had in the professional audio marketplace. The PM0.4 takes full advantage of internal bi-amplification and employs two state of the art amplifiers that utilize high-quality discrete bipolar output devices. The 4" woofer and 5/8" tweeter were expressly designed for high output, ultra low distortion and incorporate the latest technologies and manufacturing techniques.

Please take the time to thoroughly read this manual so that you may take full advantage of all the benefits of the Fostex PM0.4 Professional Studio Monitor.

Unpacking

Prior to unpacking your Fostex PM0.4 Studio Monitor, carefully inspect the packing material for excessive damage. Once it has been determined that the packing material has not been compromised, carefully unpack the PM0.4 Studio Monitor and inspect it carefully for obvious damage. Fostex takes great care in designing packing materials that will survive most expected impacts during shipping. If any damage is discovered during the inspection process, contact your Fostex dealer so that this issue can immediately be addressed.

Setup Instructions

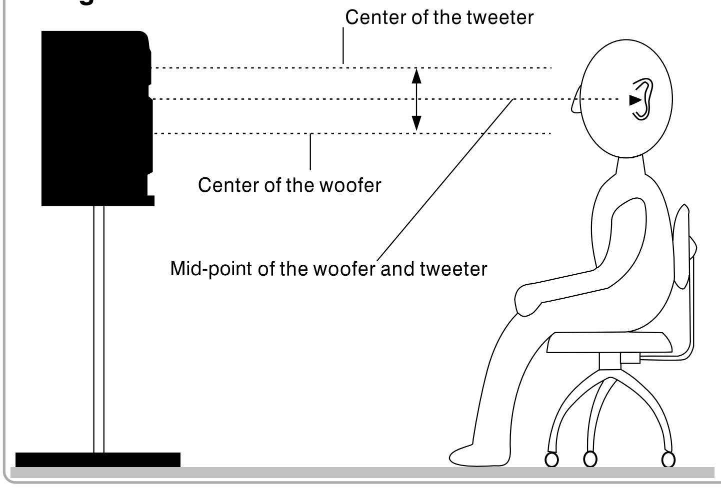
Monitoring Distance = 1 to 2 meters

After carefully unpacking the PM0.4 Professional Studio Monitor, it is now time to setup the monitors for the best acoustic performance in your studio. The PM0.4 was designed to be used at amonitoring distance of 1 to 2 meters, typically referred to as the near-field.

Monitoring Height = the acoustic center aimed at seated ear height

It is recommended that the PM0.4 be located in such a way that the acoustic center is located at, or about, seated ear height (see Figure 1). If this is not possible, it may be necessary to tilt/aim the monitor at the listeners ears.

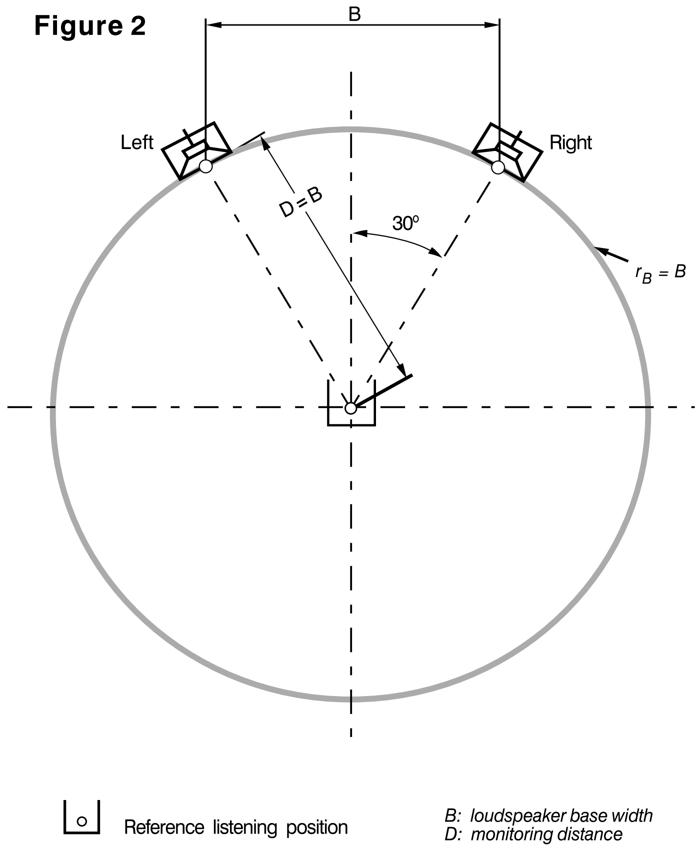
Figure 1



Monitoring Angle = 60 Degrees

The monitoring angle between the left and right monitors and the listening position should equal 60 degrees. The easiest way to determine this is to place the speakers in such a way that the distance between the left and right monitor is equal to the monitoring distance / listening position (see Figure 2). It is also recommended that both speakers be "toed-in" towards the listening position.

Figure 2



Additional Information

The PM0.4 was designed to be mounted vertically. This provides for the most accurate frequency response, reduces acoustic boundary interference and provides optimum cooling performance for the heat sink that is located on the back of the studio monitor. If it is not possible to mount the monitors vertically, then the monitors should be placed with the woofers inside and the monitors "toed-in" towards the listening area.

Setup Instructions - *continued*

Once the studio monitors have been placed in their final location, it is time to proceed to connecting your PM0.4 studio monitors to the mixing console or digital workstation. Connection to the PM0.4 can be made using RCA or TRS connectors. The gain control on the back of the monitor allows continuously variable adjustments to match most input types of line level signals (-10dBV for RCA un-balanced).
The TRS input is balanced and is also compatible with unbalanced sources, although this may require an adapter. The connection of the PM0.4 to the console/digital workstation should be done in the following order.

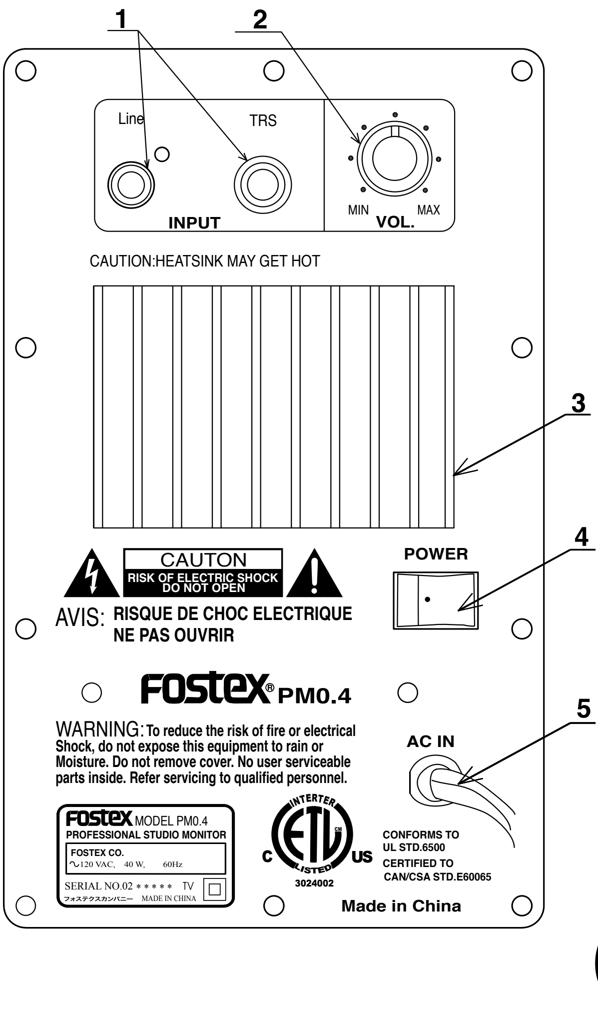
Note: Please do not plug both RCA and TRS connectors at the same time.
The PM0.4 is designed to take only one input.

Step 1: Make sure that all equipment has been powered down.
Step 2: Confirm that all gain controls, on the monitor and the source, are set to the minimum setting.
Step 3: Connect the source to the PM0.4 monitor.
Step 4: Power up the all source equipment and then turn on the PM0.4 last.
Step 5: Set the gain of both monitors at medium setting and slowly bring up the gain of the console.
Step 6: Adjust the gain of both monitors for balance and for best signal to noise ratio

Once the above steps have been completed, you are ready to use your PM0.4 monitors. It is recommended that you now play some familiar audio material and make any final adjustments, as far as placement or level, to get the optimum performance in your monitoring environment.

Back Panel Overview

1. Line (RSA) and TRS Input
The TRS is an electronically balanced input and the line input is unbalanced input. They are compatible with general line level input signals.
2. Continuously variable gain control
This control adjusts the input level to the internal amplifiers.
3. Heatsink
The heatsink dissipates heat from the amplifier. It is important the heatsink receives proper ventilation and is not placed near any sources of heat.
4. Power Switch
Turns power to the amplifier section on or off.
On - position is the spot side.
5. AC Power Cord
This line cord provides the AC power to the product. Damage to equioment may occur if improper line voltage is used. (See voltage marking on label)



Product Specifications

Drivers
Low Frequency Driver: 4" Cone Speaker
High Frequency Driver: 5/8" Soft Dome Tweeter

Cabinet Dimensions
144mm (W) x 220mm (H) x 180mm (D) includes heatsink
165mm (D) x cabinet only - no heatsink
5 3/4" (W) x 8 11/16" (H) x 7 1/8" (D) includes heatsink
6 1/2" (D) x cabinet only - no heatsink

Net Weight
3.75 Kg/pc
8Lbs 4oz/pc

Gross Weight (includes all packing material)
9.16 Kg/pair
20Lbs 6oz/pair

Frequency Response
Free-Field Frequency Response : 60Hz to 30kHz
Low Frequency Cutoff : 60Hz (-10dB)
High Frequency Cutoff : 22kHz (-10dB)

Amplifier Power
Low Frequency : 18 W
High Frequency : 18 W

Amplifier Distortion
<0.005% THD @ 12 Watts / 4Ohm 20Hz-20kHz

Amplifier Signal to Noise Ratio
>75dB
20Hz - 30kHz Not Weighted

Amplifier Slew Rate
8V/μsec

Power Requirements
US : 120VAC~60Hz
EUR/UK : 230VAC~50/60Hz

Power consumption
US : 40 Watts
EUR/UK : 40 Watts

Product improvement may warrant a change of specifications, newer materials or cosmetics, Changes in specifications and features may be made without notice or obligations.

Cable and Wiring Information

Use high-quality, shielded cables to connect your mixing console, workstation or other source to your monitors. Foil-shielded cables, such as Belden 8451, 8761, or 9501 should do quite well. Other high quality cables are available and those that incorporate better shielding will yield an overall higher noise rejection, lowering your systems susceptibility to exter nal interference. Another important tip to keep in mind when wiring your system is to route all line level cables away from the AC and other power sources, this will reduce the probability of having AC hum emanating from your studio monitors.

	XLR	TRS	RCA
HOT (+)	PIN 2	TIP	TIP
COLD (-)	PIN 3	RING	
SHIELD (GROUND)	PIN 1	SHIELD	SHIELD

Product Cleaning Instructions

Prior to cleaning the PM0.4 monitor the power must be disconnected from the PM0.4 monitor. Once the power has been terminated, cleaning can be accomplished using a damp (not wet) cleaning rag. A light common household cleaner can also be used, but care must be taken not to use harsh cleaning fluids. Regular dusting or cleaning with a damp rag will keep your product looking new for years.

Declaration of EC Directive

This equipment is compatible with the EMC Directive (89/336/EEC) - Directive on approximation of member nation's ordinance concerning the electromagnetic compatibility and with the Low Voltage Directive (73/23/EEC) - Directive on approximation of member nation's ordinance concerning electric equipment designed to be used within the specified voltage range.

The Affect of Immunity on This Equipment

The affect of the European Specification EN61000-6-1 (coexistence of electromagnetic waves - common immunity specification) on this equipment are as shown below.

In the electrical fast transient/burst requirements, surge, conducted disturbances by radio-frequency fields, power frequency magnetic field, radiate electromagnetic field requirements and static electricity discharging environment, this could be affected by generation of noise in some cases.

FOSTEX DISTRIBUTORS LIST IN EUROPE

* Including non-EU countries (as of May, 2006)

<AUSTRIA>
NAME: ATEC Audio-u.Videogeraete VertriebsgesmbH.
ADD: Im Winkel 5, A-2325 Velm, Austria
TEL: (+43) 2234-74004, FAX: (+43) 2234-74074

<BELGIUM>
NAME: General Audio
ADD: Raymond Pelgrimslaan 101, B-1702 Groot-Bijgaarden, Belgium
TEL: (+32) 2-4630650, FAX: (+32) 2-4661500

<DENMARK>
NAME: SC Sound Aps
ADD: Malervej 2, DK-2630 Taastrup, Denmark
TEL: (+45) 4399-8877, FAX: (+45) 4399-8077

<FINLAND>
NAME: Noretron Oy Audio
ADD: P.O.Box 22, FIN-02631 Espoo, Finland
TEL: (+358) 9-5259330, FAX: (+358) 9-52593352

<FRANCE>
NAME: Sennheiser France
ADD: 128 bis, avenue Jean-Jaures, 94851 Ivry-sur-Seine Cedex, France
TEL: (+33) 1 4987 0300, FAX: (+33) 1 4987 0324

<GERMANY>
NAME: Mega Audio GmbH
ADD: Stromberger Str. 32, D-55411 Bingen, Germany
TEL: (+49) 6721-94330, FAX: (+49) 6721-32046

<GREECE>
NAME: Bon Studio S. A.
ADD: 6 Zaimi Street, Exarchia, 106.83 Athens, Greece
TEL: (+30) 210-3809-605, 606, 607, 608
FAX: (+30) 210-3845-755, 210-3827-868

<ICELAND>
NAME: I. D. Electronics
ADD: ARMULA 38 108 REYKJAVIK,ICELAND
TEL: (+354) 553-3050, FAX: (+354) 553-3435

<ITALY>
NAME: Proel S. p. A.
ADD: Zona Via Alla Ruenia, 37/43 64027-Sant'Omero (Teramo), Italy
TEL: (+ 39) 0861-81241, FAX: (+39) 0861-887862

<THE NETHERLANDS>
NAME: IEMKE ROOS AUDIO B. V.
ADD: Kuiperbergweg 20, 1101 AG Amsterdam, The Netherlands
TEL: (+31) 20-697-2121, FAX: (+31) 20-697-4201

<NORWAY>
NAME: Siv. Ing. Benum AS
ADD: P. O. Box 145, Vinderen, 0319 Oslo, Norway
TEL: (+47) 2213 9900, FAX: (+47) 2314 8259

<PORTUGAL>
NAME: Caius - Tecnologias Audio e Musica, Lda.
ADD: Praca do Bom Sucesso, No 61 Bom Sucesso Trade Center, Escritorio 701/702, 4150-1460 Porto, Portugal
TEL: (+351) 22-608-06-10, FAX: (+351) 22-608-06-29

<SPAIN>
NAME: Letusa S. A.
ADD: C/Laguna 10, 28923 Alcorcon, Madrid, Spain
TEL: (+34) 91-4862800, 91-4470898, FAX: (+34) 91-6414597

<SWEDEN>
NAME: Sennheiser AB
ADD: John Ericssonsgatan 10, P. O. Box 22035, SE-104 22 Stockholm, Sweden
TEL: (+46) 8 566 16400, FAX: (+46) 8 566 16490

<SWITZERLAND>
NAME: Audio Bauer Pro AG
ADD: Bernerstrasse-Nord 182, CH-8064 Zurich, Switzerland
TEL: (+41) 1-4323230, FAX: (+41) 1-4326558

<UK>
NAME: SCV London
ADD: 40 Chigwell Lane, Oakwood Hill Industrial Estate, Loughton, Essex IG10 3NY U. K.
TEL: (+44) 20-8418-0778, FAX: (+44) 20-8418-0624